

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)
2. (Previously presented) Zoom apparatus according to claim 9, wherein during the transition period between discrete zoom levels the optical zoom lens is arranged to be adjusted to substantially compensate for the change in discrete digital zoom level.
3. (Original) Zoom apparatus according to claim 2, wherein the optical zoom lens is arranged to be automatically adjusted to a point in the optical zoom lens zoom range that provides, as a product of zoom level with the changed digital zoom level, a total apparent zoom level substantially equal to the zoom level provided by the digital interpolation.
4. (Previously presented) Zoom apparatus according to claim 10, wherein the zoom lens is arranged to be automatically adjusted from a first end of the zoom range of the zoom lens towards a second end of the zoom range during the transition period between discrete zoom levels.

5. (Original) Zoom apparatus according to claim 4, wherein the transition period between discrete zoom levels is arranged to be initiated only at the end points of the optical zoom lens zoom range.

6. (Previously presented) Zoom apparatus according to claim 9, wherein the digital zoom apparatus is arranged to apply the digital interpolation such that the rate of change of total apparent zoom level is substantially equal to the rate of change of zoom level provided by the optical zoom lens.

7. (Previously presented) Zoom apparatus according to claim 9, wherein the discrete digital zoom levels are arranged to be provided by applying discrete charge binning schemes.

8. (Cancelled)

9. (Previously presented) Zoom apparatus for digital image processing comprising:

an optical zoom lens arranged to provide an image across a continuous zoom range;

an image sensor arranged to receive an image from the optical zoom lens and to provide a digital representation of the image; and

digital zoom apparatus arranged to apply (a) one of at least two discrete zoom levels to the digital representation of the image such that the total apparent zoom level is the product of the discrete digital zoom level and the optical zoom level, and (b) digital interpolation to the digital representation of the image during a transition period between discrete zoom levels, the transition period between discrete zoom levels being arranged to be initiated only at the end points of the optical zoom lens zoom range.

10. (Previously presented) Zoom apparatus for digital image processing comprising:

an optical zoom lens arranged to provide an image across a continuous zoom range;

an image sensor arranged to receive an image from the optical zoom lens and to provide a digital representation of the image; and

digital zoom apparatus arranged to apply (a) one of at least two discrete zoom levels to the digital representation of the image such that the total apparent zoom level is the product of the discrete digital zoom level and the optical zoom level, and (b) digital interpolation to the digital representation of the image during a transition period between discrete zoom levels, the digital zoom apparatus being arranged to apply the digital interpolation such that the rate of change of total apparent zoom level is substantially equal to the rate of change of zoom level provided by the optical zoom lens.

11. (Previously presented) Zoom apparatus according to claim 10, wherein the discrete digital zoom levels are arranged to be provided by applying discrete charge binning schemes.

12.-22. (Cancelled)

23. (Previously presented) A digital camera in combination with the zoom apparatus according to claim 9.

24. (Previously presented) A digital camera in combination with the zoom apparatus according to claim 10.

25. (Previously presented) Zoom apparatus according to claim 10, wherein during the transition period between discrete zoom levels the optical zoom lens is arranged to be adjusted to substantially compensate for the change in discrete digital zoom level.

26. (Previously presented) Zoom apparatus according to claim 25, wherein the optical zoom lens is arranged to be automatically adjusted to a point in the optical zoom lens zoom range that provides, as a product of zoom level with the changed digital zoom level, a total apparent zoom level substantially equal to the zoom level provided by the digital interpolation.

27.-29 (Cancelled)